

## REMARKS

Enclosed is an Affidavit from Mr. Curtis Walter Preuss, an engineer from IBM, who performed a comparative testing of a circuit according to the present invention and a circuit according to Fig. 2 of U.S. Patent No. 6,313,696B1. Reexamination and reconsideration of the Application is hereby requested in view of the Affidavit and the following remarks.

### ***Drawing Replacement***

The Office Action indicated the proposed amendment to Fig. 1 has been approved, and the replacement drawings are attached herein.

### ***Claim rejection under 35 U.S.C. §103***

The Office Action rejected claims 1-10 under 35 U.S.C. §103(a) as being unpatentable over Zhang (U.S. Pat. No. 6,313,696) in view of Sasaki (U.S. Pat. No. 5,039,873). Applicants respectfully traverse the rejection and request reconsideration.

The Office Action stated that Zhang disclosed all elements of claim 1, except a passive bias circuit. The Office Action further stated that Sasaki teaches that when a transistor is on, it is functionally equivalent to a resistor. The Office Action also stated that it would have been obvious to one of ordinary skill in the art to substitute a resistor for each transistor 32, 33, 36, and 37 in Fig. 2 of the Zhang reference, and with such a modification, the bias circuit will be a passive bias circuit with four resistors. Thus, the Office Action concluded that the combination of Zhang and Sasaki renders claim 1 obvious. Further, the Office Action stated that it is obvious to one having an ordinary skill in the art at the time of the invention to replace each of the transistors with a resistor because they are functionally equivalent.

### ***The Circuit According to the Present Invention Is Not Equivalent to the Circuit disclosed in Zhang***

Applicants direct the Examiner's attention to the Affidavit from Mr. Curtis Preuss enclosed herein and its attachments. Mr. Preuss performed a comparative testing between a circuit according to the present invention and a circuit according to Zhang and analyzed the results from the comparative testing. The resistance at a transistor's channel changes substantially when the channel is submitted to a large voltage variance as measured in Zhang's circuit, while the resistance of the resistor in the present invention's circuit remains constant [Preuss Affidavit, ¶ 9]. Because of difference in resistance observed, the circuit according to the present invention is not equivalent to the circuit shown in Zhang [Preuss Affidavit, ¶ 10].

*The Cited References Do Not Teach Or Suggest Passive Biasing*

The Examiner stated that the functional limitation of the passive bias element is met because the structure resulting from the modification to Zhang is the same as the structure of the present invention.

Applicants respectfully point out that, although the circuit in Zhang if modified results in a circuit identical to one disclosed the present invention, it is the circuit in the present invention that teaches passive biasing and not the Zhang's circuit. Zhang teaches active biasing because Zhang employs a transistor (FET), which is an active device and not a passive device. The FET is equivalent to a resistor when the FET is on (Sasaki, Fig. 4(c), col.1, lines 20-22). The FET has to be active for it to be equivalent to a resistor, which is what Zhang discloses. Therefore, Zhang does not disclose passive biasing.

*MPEP 2112.01 Permits Rebuttal of Prima Facie Case Based on Substantial Similarity of a Reference to the Invention*

The Examiner stated that "the rejection under 35 USC 103, the function limitation 'the passive bias element capable of biasing the active differential amplifier elements so that the active differential amplification element operates in saturation mode' is met because the structure of the above modification (...) is the same as the structure of the claimed invention" according to MPEP 2112.01.

Applicants respectfully point out that MPEP 2112.01 also states that "the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claim product." Applicants hereby submit that the affidavit from Mr. Preuss shows that the circuit in Zhang does not have equivalent advantages as those of the present invention.

As stated above, Mr. Preuss' affidavit and corresponding attachments show that the resistance is different between a FET and a resistor and the voltage output from a circuit according to Zhang has more distortion and less bandwidth. It is clear from Mr. Preuss' affidavit that the Zhang's circuit is not equivalent to the circuit of the present invention.

*There Must Be Some Suggestion for Combination*

The Examiner recognized that obviousness can only be established by combining or modifying the teaching of the prior art to produce the claimed invention where there is some

teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one skill in the art.

However, the Examiner failed to recognize that “the mere fact that teaching found in the prior art could be combined as proposed by an examiner does not make the combination obvious ‘absent some teaching, suggestion, or incentive supporting the combination’” adopted by the USPTO’s Board of Patent Appeals and Interference (Ex parte Metcalf, 67 USPQ2d 1633, 10635, May 2, 2003).

The Examiner stated that it is obvious to one of ordinary skill in the art, at the time the invention was made, to replace the transistors with resistors because they are functionally equivalent. Applicants traverse this statement and respectfully request that the Examiner present evidence in support thereof, or withdraw the rejection.

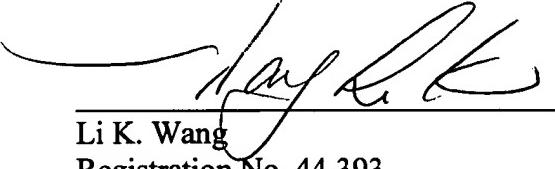
Therefore, Applicants submit that claim 1 and claims 2-6, that depend therefrom, are patentable over the cited references, and Applicants request that these rejections be withdrawn.

For the similar reasons stated above, Applicant submit that claim 7 and claims 8-10 that depend therefrom are equally patentable over the cited references, and Applicants request that these rejections be withdrawn.

Applicants believe that this case is in condition for allowance and that all claims be allowed.

No addition fees are believed due. However, the Commissioner is hereby authorized to charge any additional fees which may be required, including any necessary extensions of time, which are hereby requested, to Deposit Account No. 501403.

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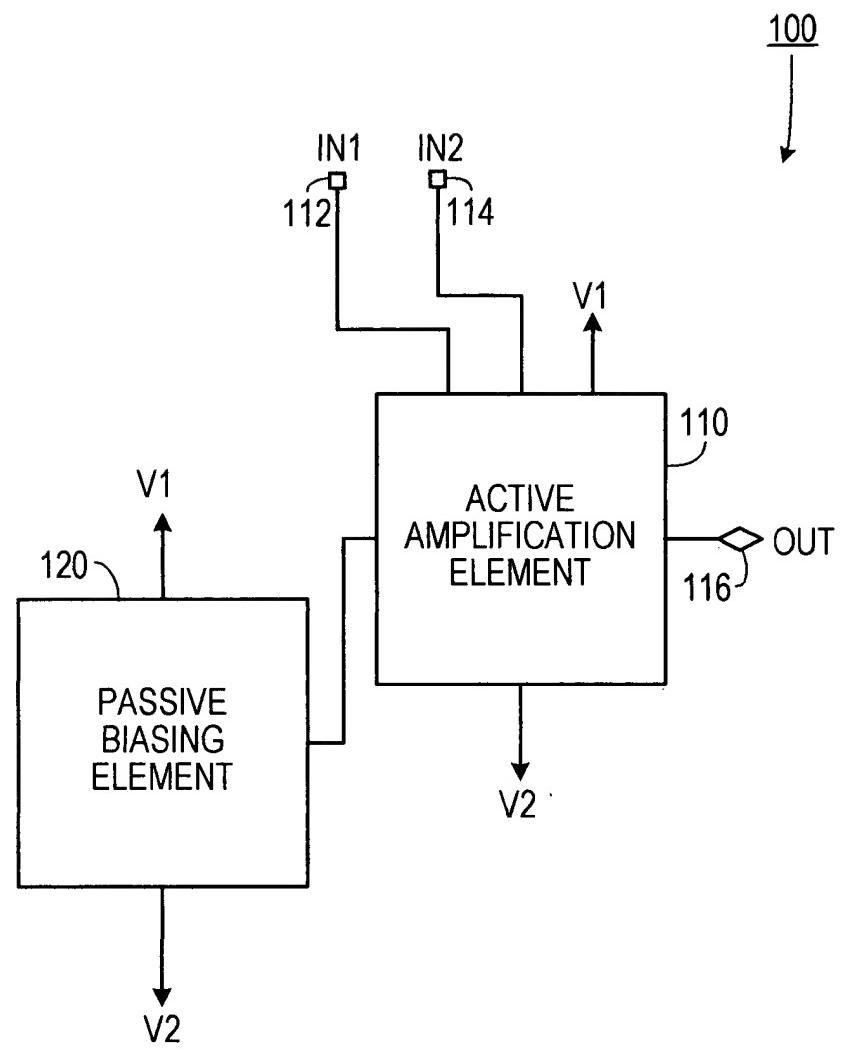


FIG. 1

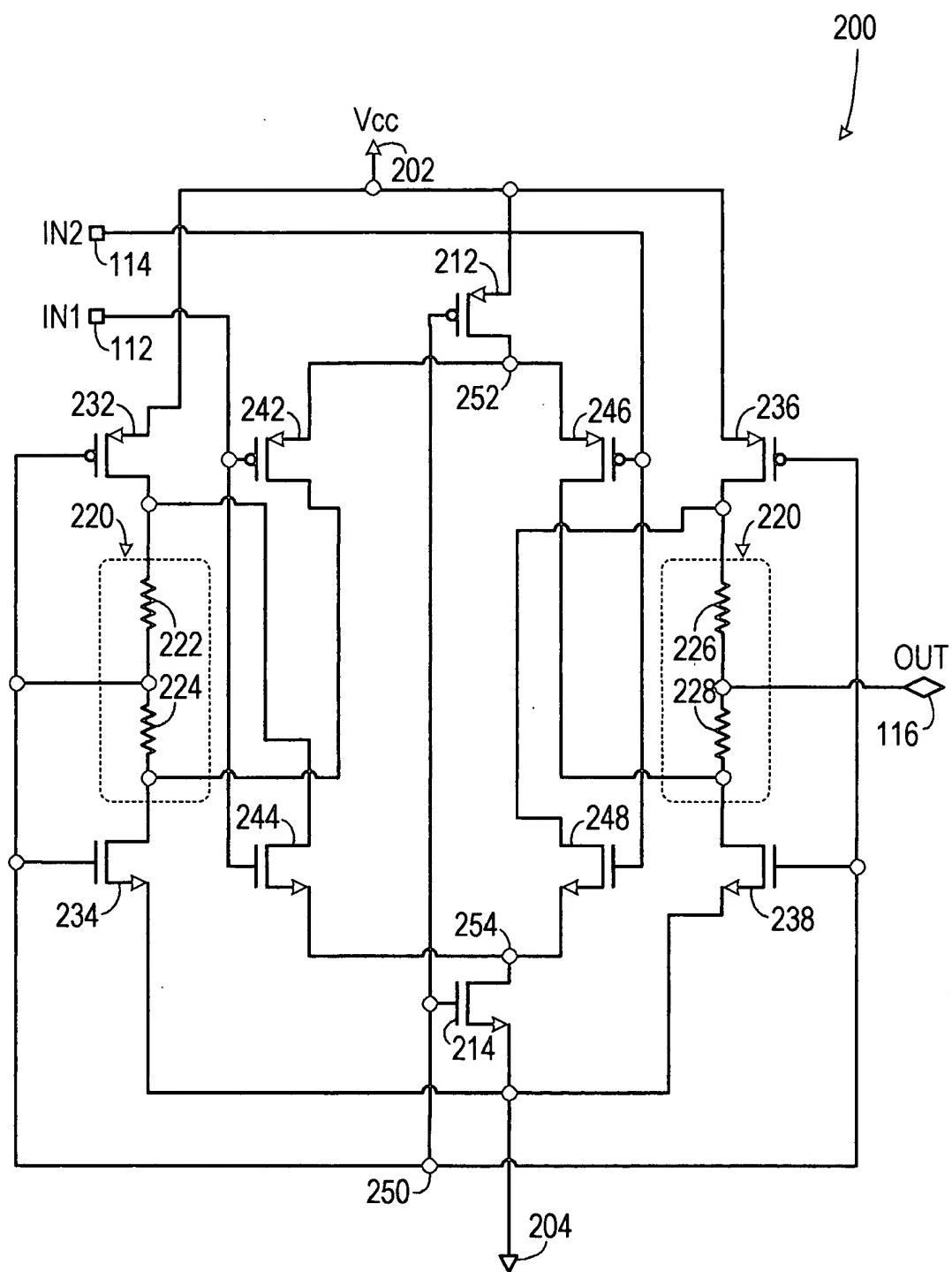


FIG. 2